Abstract

A linear opto-frequency chirp amount variable apparatus using a dielectric multilayer film mirror which does not require the optical axis to be realigned each time the amount of a chirp is to be varied, comprises a pair of dielectric multilayer film mirrors (2) and (2) arranged so that their mirror surfaces (2a) and (2a) extends parallel, and are opposed, to each other, and a movable mirror (4) disposed in a space defined between the dielectric multilayer film mirrors (2) and (2). The movable mirror (4) is inclined so that an incident light (5) that is incident obliquely from one end (3a) of the space (3) defined between the two dielectric multilayer film mirrors (2) and (2) and is then allowed to reflect on and between them a plurality of times is reflected by the movable mirror into a direction parallel to the dielectric multilayer film mirror surfaces (2a) and in an incidence plane defined by the incident light (5) and a plane-normal (6) to each dielectric multilayer film mirror (2) and towards that one end (3a). The movable mirror (4) is movable in a direction that is parallel to the dielectric multilayer film mirror surfaces (2a) and extends in the incidence plane (7). Moving the movable mirror (4) forwards and backwards in this direction changes the amount of a chirp to be imparted to the incident light as an input light.